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10/707,105	11/20/2003	Hirokazu Yamamoto	KM-US030558	1104

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EXAMINER	
HA, NGUYEN Q	

ART UNIT	PAPER NUMBER
2854	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/707,105	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	'Wynn' Q. HA	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/19/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 1, 7 and 13 are objected to because of the following informalities: It appears that a word --detected-- is missing between "a second portion that simultaneously shows at least an abnormality" and "for each of the corresponding paper supply unit..."

Claim 20 is objected to because the number "1" appears to be a clerical error that could be changed to --7--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The (new) subject matter, which has been added to claims 1 and 13, includes:

*"**the display unit (or the display function)*** restricting operation of the paper supply unit selection when at least one abnormality has been detected."

As disclosed in the applicant-provided specification, paragraph [0043], **the operation unit** 15 (not the display unit 16) appears to be the one that controls the paper supply unit selection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5 and 9 basically claim a paper remaining display unit that displays an abnormality for an amount of paper (e.g. "no paper") in the paper supply unit. However, the independent claims 1 and/or 7 (which claims 5 and/or 9 depend on) claim to the contrary "the abnormality being different from an amount of paper in the paper supply unit."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-16 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Masuda et al. (US 5,182,597), and further in view of Itagi et al. (JP 11184590 A).

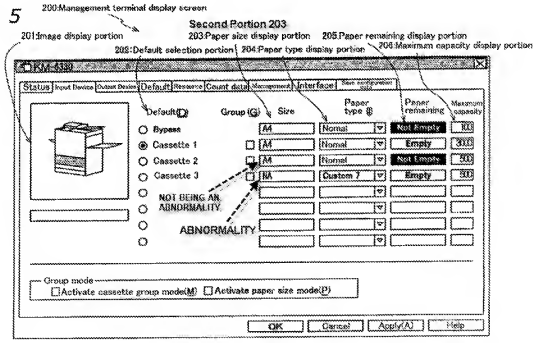
Claim 1:

Applicant admitted prior art teaches a conventional abnormality management device 200 (shown in fig. 5, reproduced on next page) connected via a network to an image forming device that includes a plurality of selectively used paper supply units or paper discharge units, the abnormality management device managing abnormalities in the image forming device and comprising:

a display unit having

an image display portion 201 that displays an image of an image forming device in which the plurality of the paper supply units or paper discharge units are visually distinguished from each other,

Fig. 5



a second portion 203 that simultaneously shows at least an abnormality (denoted by "N/A" for a custom-size or abnormal-size paper) detected for each of the corresponding paper supply unit and a notification (denoted by "4A" for a normal A4-size paper) not being an abnormality, and

an abnormality detection unit that detects abnormalities in the paper supply units or the paper discharge units based upon equipment data acquired from the image forming device, the abnormalities being different from an amount of paper in the paper supply unit (as discussed above, "N/A" if for an abnormal-size paper which is different than an amount of paper in the paper supply unit).

Applicant admitted prior art doesn't teach:

an operation unit restricting operation of the paper supply unit selection when at least one abnormality has been detected, and

an abnormality display unit that displays with emphasis the location of the paper supply unit or paper discharge unit in which an abnormality was detected by the abnormality detection unit on the image of the image forming device.

Masuda teaches a related abnormality management device (shown in fig. 2 which is reproduced below), wherein:

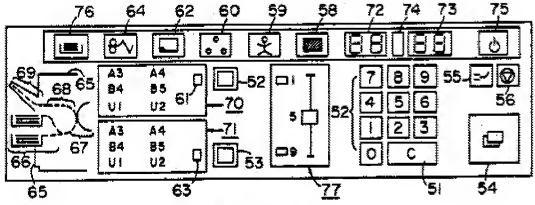


FIG. 2

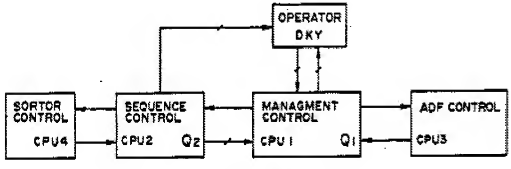


FIG. 3

the abnormality management device being connected to an image forming device that includes a plurality of selectively used paper supply units or paper discharge units, the abnormality management device managing abnormalities in the image forming device and comprising a display unit having an image display portion (far left of fig. 2) that displays an image of an image forming device in which the plurality of the paper supply units or paper discharge units are visually distinguished from each other, and a second portion 72 that shows at least an abnormality (denoted by a code number, which is to be discussed further in claim 19) detected in one of the paper supply units and a notification (also denoted by a code number) not being an abnormality. Further, Masuda teaches that an operation unit CPU2 (fig. 3) would restrict operation of the paper supply

unit selection when at least one abnormality, e.g. jam, has been detected (Col. 10 lines 67-68 "No setting can be affected even by depression of the keys, at the time of the paper jamming..." Col. 12 lines 4-6 "keys 51 to 55 [each of keys 52 and 53 selects an upper or lower paper supply unit] do not work at all for input, even if they are turned on at the time of the paper jamming...") in order to verify various information, such as a jam location or remaining amount of copy paper, that might have caused the abnormality (Col. 4 lines 34-40).

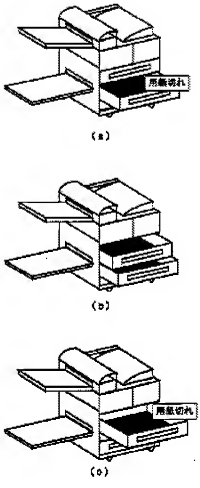
Itagi on the other hand, as discussed in the Office action of 12/19/2007, teaches:

an abnormality detection unit that detects abnormalities in the paper supply units or the paper discharge units based upon equipment data acquired from the image forming device, the abnormalities being different from an amount of paper in the paper supply unit (Itagi's figs. 13, 14 and 16, reproduced on next pages, show three different abnormalities, only one of which shows "no paper" in a paper supply unit); and

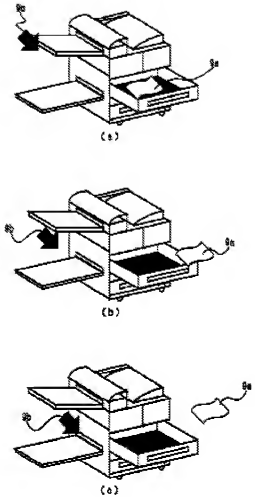
an abnormality display unit that displays with emphasis the location of the paper supply unit or paper discharge unit in which an abnormality was detected by the abnormality detection unit on the image of the image forming device;

in order to provide a user with a friendly piece of equipment that shows a location of a paper jam, etc. generated on a particular paper supply unit at a glance (Itagi's paragraph 0061).

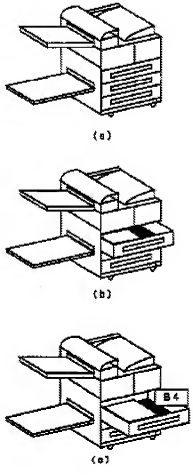
【図１３】



【図１４】



【図16】



It would have been obvious to one of ordinary skill in the art at the time the present invention was made to have the conventional abnormality management device (shown in Applicant disclosed fig. 5) equipped with an operation unit restricting operation of the paper supply unit selection when at least one abnormality has been detected, as taught by Masuda, in order to verify various information, such as a jam location or remaining amount of copy paper, that might have caused the abnormality; and

an abnormality detection unit that detects abnormalities in the paper supply units or the paper discharge units based upon equipment data acquired from the image forming device, the abnormalities being different from an amount of paper in the paper

supply unit; and an abnormality display unit that displays with emphasis the location of the paper supply unit or paper discharge unit in which an abnormality was detected by the abnormality detection unit on the image of the image forming device, as taught by Itagi, in order to provide a user with a friendly piece of equipment that shows a location a paper jam, etc. generated on a particular paper supply unit at a glance.

Claim 2:

Applicant admitted prior art, as modified, teaches the abnormality management device set forth in claim 1, further comprising

a default paper supply unit determining unit 202 (See Applicant disclosed fig. 5 above and paragraph 0008) that determines whether one paper supply unit from amongst the plurality of the paper display units has been selected as a default, and

a default display unit 201 (same fig. 5 and paragraph 0008) that displays with emphasis the position of the paper supply unit selected as a default on the image of the image forming device by means of a representation that is different from a representation used to display the paper supply unit in which an abnormality was detected.

Claim 3:

Applicant admitted prior art, as modified, teaches the abnormality management device set forth in claim 1, further comprising

an out of paper determining unit that determines based upon equipment data acquired from the image forming device whether any of the plurality of paper supply units have run out of paper, and an out of paper display unit that displays with emphasis the position of a paper supply unit that has run out of paper on the image of the image

forming device by means of a representation that is different from a representation used to display the paper supply unit in which an abnormality was detected (Itagi's fig. 13 shows "no paper" in one or several of the paper trays. Itagi's Paragraph [0059] states "the animation not only of the components which constitute the image but also of non-component parts such as a form or paper shown in fig. 14).

Claim 4:

Applicant admitted prior art, as modified , teaches the abnormality management device set forth in claim 1, further comprising a paper size display unit 203 (Applicant disclosed fig. 5, paragraph 0008) that displays based upon equipment data acquired from the image forming device the size of paper stored in each paper supply unit,

wherein the abnormality display unit displays an abnormality by means of a symbol "N/A" (same fig. 5) or an image in a paper size display location of a paper supply unit in which an abnormality has been detected by means of the abnormality detection unit (as Itagi's fig. 16 also displays an image of a paper size **"B4"** in the uppermost paper tray).

Claim 5:

Applicant admitted prior art, as modified, teaches the abnormality management device set forth in claim 1, further comprising a paper remaining display unit 205 (Applicant disclosed fig. 5, paragraph 0008) that displays based upon equipment data acquired from the image forming device the amount of paper remaining in each paper supply unit,

wherein the abnormality display unit 205 displays an abnormality by means of a symbol "Empty" (same fig. 5) or an image in a paper remaining display location of a

paper supply unit in which an abnormality has been detected by means of the abnormality detection unit (as Itagi's fig. 13 also displays an image of a "no paper" in one or several of the paper trays).

Claim 6:

Applicant admitted prior art, as modified, teaches the abnormality management device set forth in claim 1, further comprising a sound abnormality generating unit that generates a sound when an abnormality is detected in a paper supply unit or a paper discharge unit by the abnormality detection unit (Masuda col. 12 lines 4-9 "The abovementioned keys 51 to 55 do not at all work for input, even if they are turned on at the time of the paper jamming and the service-man-call. When these keys are effectively turned on [when, for example, a jam is detected], very brief oscillating sound is generated").

Claim 7 (parallel to claim 1):

Applicant admitted prior art, as modified, teaches an abnormality management system 200 for an image forming device (Applicant disclosed fig. 5, paragraph 0010), comprising all the elements being claimed.

Claims 8-12 (parallel to claims 2-6):

Applicant admitted prior art, as modified, teaches the abnormality management system set forth in claim 7, comprising all the elements being claimed.

Claim 13:

Applicant admitted prior art, as modified, teaches a computer readable medium comprising:

an abnormality management program (Applicant disclosed prior art paragraph 0007 "management program") is executed in a computer that is connected via a network to an image forming device that includes a plurality of selectively used paper supply units or paper discharge units, the abnormality management program managing abnormalities in the image forming device and comprising a display function showing all that is being claimed (and discussed in claim 1).

Claims 14-16:

Applicant admitted prior art, as modified, teaches the abnormality management device set forth in claim 1, or claim 7, or claim 13, wherein emphasis includes at least one of a ***differentiating*** color, ***design***, and a flashing light.

Claims 19 and 20:

Applicant admitted prior art, as modified, teaches the abnormality management device set forth in claim 1 or claim 7, wherein the abnormality detection unit represents an abnormality using a non-alphabetical symbol, such as code number 1-3 or 11-13, etc., in the second portion (Masuda col. 12 line 64 – col. 13 line 7 "this segment indicator 72 indicates the sensor in trouble as detected in the examination operation of the sensor which is carried out by the self-examination switch 49, in terms of a code number. In more detail, the sensor for detecting the oblique paper movement from the upper cassette is indicated by the code numbers 1-3, the

sensor for detecting the oblique movement from the lower cassette is indicated by the code numbers 11-13, the image transfer sensor is denoted by a code number 4, the discharge sensor is denoted by a code number 5, the register sensor is denoted by a code number 6, and "no abnormality" is denoted by a code number 88".

Apparently, the reason for the code number being a displayed symbol for an abnormality, as taught by Masuda, is to facilitate further trouble shooting and/or determining a kind of abnormality, e.g. a paper jam in a paper supply unit or an oblique paper movement in a same paper supply unit. In other words, a paper jam or an oblique movement a paper in a same paper supply unit can be positively differentiated by different code numbers. Said differentiation in a same paper supply unit might not be possible otherwise).

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Masuda, and Itagi, and further in view of Hosaka (JP 56154751 A).

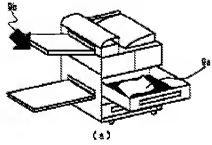
Applicant admitted prior art, as modified, teaches the abnormality management device set forth in claim 1 or claim 7, including that the abnormality detection unit 11 detects a condition of the paper supply unit (Itagi Paragraph [0031] "the detection means which consists of a sensor which detects a paper jam, the switching condition of a form piece and a tray, etc)."

Applicant admitted prior art, as modified, doesn't expressly teach the (displayed) abnormalities in the paper tray unit consist of paper jams and improperly mounted cassettes.

Hosaka, as discussed in the Office action of 12/19/2007, teaches sensing and controlling abnormalities in an image forming device, the abnormalities include "presence of cassettes of recording papers, presence of recording papers in them, arrival of the papers at a given point, feed and discharge of originals (i.e. conveyance or jam states), and the like states are detected by sensors in a copying apparatus, and start, stop, continuation, etc. of record processing actions are controlled by a microcomputer MPU. Sensor PS1 for detecting attachment of a cassette and sensor MS1 are combined via transistor Tr in series to connect them to detection port P1-1of MPU, and as for the other sensors, similar connections are made, thus permitting the port number to be reduced remarkably, a sensor connection system to be simplified, and readout efficiency to be enhanced (Abstract)."

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to include a state of improperly mounted cassettes as an abnormality and further to combine the detection/display of the state of paper jams with the detection/display of the state or condition of the paper supply unit (absent or improperly mounted). That is, for example, both the states of paper jams and/or improperly mounted upper cassette would be indicated by the displayed image shown in Itagi's fig. 14a (reproduce on next page). This would reduce the number of necessary input and output ports, as taught by Hosaka.

【図１４】



Response to Arguments

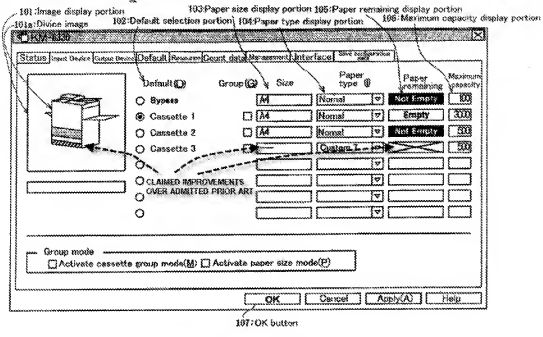
Applicant's arguments with respect to claims 1, 7 and 13 have been considered but are moot in view of the new ground(s) of rejection.

As being claimed, the present invention (shown in fig. 4, reproduced again on the next page) is distinct from Applicant admitted prior art (shown in fig. 5, also reproduced again on the next page) mainly by the bottom paper supply unit highlighted as shown in the section 101 of fig. 4 and the symbol "—" shown in second section 103 also of fig. 4 (See paragraphs 0009, 0010 0018, 0021). These two differences, as well as the others being claimed, are taught by Masuda, Itagi, and/or Hosaka, as discussed above.

The third section 105 of fig. 4 is also distinct from the section 205 of fig. 5 by replacing the alphabetical symbol "Empty" (in fig. 5) with a non-alphabetical symbol "X" (in fig. 4). However, any claim regarding this third section 105, which is labeled "Paper remaining," would contradict the prior definition in the independent claims 1, 7 and 13 claiming "the abnormalities are different from an amount of paper in the supply unit," as in the case of claims 5 and 9 discussed in the 35 USC 112 rejections above.

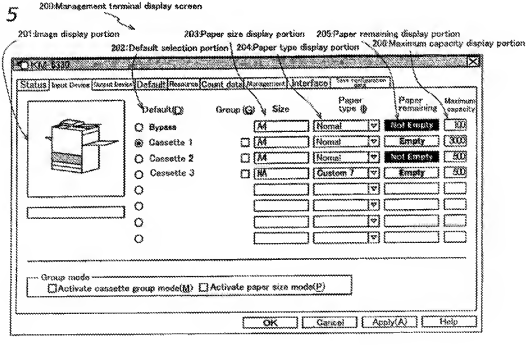
CLAIMED INVENTION, FIG. 4

Fig. 4



ADMITTED PRIOR ART, FIG. 5

Fig. 5



Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to 'Wynn' Q. HA whose telephone number is (571)272-2863. The examiner can normally be reached on Monday - Friday, from 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NQH
May 6, 2008

/Daniel J. Colilla/
Primary Examiner
Art Unit 2854